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| 10/725,124      | 12/01/2003  | Thomas F. Bailey     | WEAT/0173.C1        | 2618             |

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EXAMINER

BOMAR, THOMAS S

ART UNIT PAPER NUMBER

3672

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/725,124

Applicant(s)

BAILEY ET AL.

Examiner

Shane Bomar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22-30 and 46-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-30 and 46-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 47 and 48 are objected to because of the following informalities: the recitation of "the path" in claim 47 is indefinite because it is not clear whether the flow path or the signal path is being referred to; the recitation of "wherein downhole device" in claim 48 should most likely be --wherein the downhole device--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 46-48, 22, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 6,367,565 to Hall.

Regarding claim 46, Hall discloses a method for communicating with a downhole device comprising positioning a tubular string 25 in a wellbore (see Figs. 1 and 2, and col. 4, lines 13-36). The tubular string 25 includes a signal transducing downhole device 23 and an axially extendable signal conducting tool 21 having a flow path therethrough, wherein the signal conducting tool is located between the downhole device and an upper end of the tubular string (see Fig. 2 and col. 6, lines 20-21). The method also includes sending a signal between the downhole device 23 and a location 27 above the tool 21, the signal traversing a path through the tool 21 wherein the path is physically separated from the fluid flow path (see Figs. 3-5 and col. 6, line 30 through col. 7, line 20).

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Regarding claim 47, the path includes a wall 24 of the signal conducting tool 21 (see Figs. 3-5).

Regarding claim 48, the downhole device is a drill bit (see col. 6, lines 20-21).

Regarding claim 22, the method further comprises transmitting a signal from at least one sensor 22 located below the tool 21 and adjacent the downhole device 23 (see col. 7, lines 47-56).

Regarding claim 27, the downhole device is a drilling hammer and actuating the hammer is by an electrical transmission from the surface (see col. 5, line 56 through col. 6, line 9).

***Claim Rejections - 35 USC § 103***

4. Claims 49, 50, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of US patent 4,899,834 to Weldon.

Regarding claims 49 and 30, Hall teaches the method of claims 46 and 47 that includes a downhole device actuated by an electrical transmission from the surface. It is not taught that the device is a vibrator.

Weldon teaches a method for communicating with a downhole device similar to that of Hall. It is further taught that the downhole device is a vibrator (see col. 4, lines 1-7). It would have been obvious to one of ordinary skill in the art, having the teachings of Hall and Weldon before him at the time the invention was made, to modify the drill bit taught by Hall to include the vibrator of Weldon, in order to obtain a bit that can penetrate very hard formations (see col. 1, lines 40-45 of Weldon). One would have been motivated to make such a since Weldon has shown it to be notoriously known in the art to use a vibrator downhole to assist in drilling hard formations.

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Regarding claims 50 and 29, Hall teaches the method of claims 46 and 47 that includes a downhole device actuated by an electrical transmission from the surface. It is not taught that the device is a rotatable steering apparatus.

Weldon teaches a method for communicating with a downhole device similar to that of Hall. It is further taught that the downhole device is a rotatable steering apparatus (see col. 3, lines 45-62). It would have been obvious to one of ordinary skill in the art, having the teachings of Hall and Weldon before him at the time the invention was made, to modify the downhole device taught by Hall to include the rotatable steering apparatus of Weldon, in order to obtain a device that can orient a drill bit respective to the vertical axis. One would have been motivated to make such a since Weldon has shown it to be notoriously known in the art to use a rotatable steering apparatus downhole to assist in drilling boreholes.

5. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of US patent 4,416,494 to Watkins et al.

Hall teaches the method of claim 22 that includes a sensor. It is not taught that the sensor measures temperature, pressure, or chemical characteristics of a fluid around the bit.

Watkins et al teach a method and apparatus for controlling drilling similar to that of Hall. It is further taught that at least one sensor is located adjacent the bit that measures temperature, pressure, and chemical characteristics of a fluid around the bit (see Fig. 1 and col. 5, lines 36-48). It would have been obvious to one of ordinary skill in the art, having the teachings of Hall and Watkins et al before him at the time the invention was made, to modify the drill bit taught by Hall to include the sensor instrument of Watkins et al, in order to obtain measurements of subsurface conditions or parameters. One would have been motivated to make such a

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combination since Watkins et al has shown that it was notoriously known in the drilling art to sense downhole parameters adjacent the bit and transmitting the data uphole via electrical power, and since Hall has shown that data obtained from a sensor can be sent uphole through the electrical transmitting tubular.

6. Claims 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of US patent 6,296,066 to Terry et al.

Hall teaches the method of claim 46, wherein a downhole device is included. It is not expressly taught that the device is a thruster or a stabilizer.

Terry et al teach a method and apparatus for controlling drilling similar to that of Hall. It is further taught that a downhole device for the controlled drilling can be a thruster or a stabilizer (see col. 15, lines 20-25 and col. 17, lines 13-30). It would have been obvious to one of ordinary skill in the art, having the teachings of Hall and Terry et al before him at the time the invention was made, to modify the method taught by Hall to include the downhole thruster or stabilizer of Terry et al, in order to obtain a drill string that can be propelled and steered in any direction more effectively. One would have been motivated to make such a combination since Terry et al have shown that it was notoriously known in the art of drilling control to use stabilizers and thrusters as downhole device for such control.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 21-45 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Evans teaches a downhole tool with an electrical conductor of interest.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

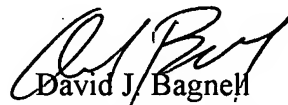
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 703-305-4849. The examiner can normally be reached on Monday - Thursday from 7:00am to 4:30pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David J. Bagnell  
Supervisory Patent Examiner  
Art Unit 3672



tsb

January 12, 2005